Project	IEEE 802.20 Working Group on Mobile Broadband Wireless Access	
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Title	Draft Meeting Minutes, 802.20 Interim Meeting - Session #22, London, England, UK, Jan 15-19, 2007	
Date	2007- <u>03-14</u>	De
Submitted		٦
Source(s)	Yvette Ho Sang, as acting Recording Secretary for the session IEEE Standards Association 445 Hoes Lane Piscataway, NJ 08854	
Re:	802.20 Session#22	
Abstract	Draft of the Minutes of the Session #22	
Purpose	Minutes of the Session.	
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Draft - Meeting Minutes of the 802.20 Session #22

Jan 15–19, 2007 London, England UK Yvette Ho Sang, as Acting Recording Secretary

The 22nd session of 802.20 was held at the Jan 2007 Interim meeting of IEEE 802.

Contributions and WG documents referenced in these minutes can be found at the 802.20 website, http://www.ieee802.org/20/

See the Appendix A-1 for the overall session attendance and participation credit list. See the Appendix A-2 for the affiliation statements submitted.

Minutes of 802.20 Monday Jan 15, 2007

Meeting started at 10:30 AM.

A Call for Patents was conducted by Chair Arnie Greenspan with presentation of the patent slides found at http://standards.ieee.org/board/pat/index.html.

Roll call attendance was conducted. The result showed no quorum since 57 of 149 members were in attendance.

The Chair presented his opening remarks (see 802.20-07/01).

The draft of the amended Dallas minutes was approved by members in the room (no dissent from approval).

The Chair gave an update on the IEEE P802.20 PAR status. The PAR has been conditionally approved for 2 years.

A call for Vice Chair and Recording Secretary was conducted by Chair Greenspan. It was noted that the Interim Recording Secretary would no longer be able to assist the working group, so a replacement is urgently needed for the March Plenary.

A status on the IEEE P802.16m PAR was given by Chair Greenspan. All suggestions and recommendations by the IEEE 802.20 WG were included in the IEEE P802.16m PAR.

Chair Greenspan gave a status of appeals. He noted that the Upton appeal of the Appeal panel decision on the appeal decisions of the IEEE 802.20 Working Group Chair originally heard March 8, 2006 was adjudicated and denied by the IEEE-SASB. All other pending appeals will be heard by appeal panels of the IEEE-SA BoG.

Discussion of Project Development Plan and Call for Proposal

The Chair noted that the accelerated schedule was ambitious, but that it was a target. He noted that the Call for Proposal could result in additional proposals or partial proposals that may impact the schedule. The dates would be adjusted if necessary.

Sassan Ahmadi questioned whether a WG ballot was required to approve the Project Development Plan. The plan indicates intermediate steps to get to sponsor ballot. He noted that the plan assumes that the current draft is the baseline document, which may not be correct.

The Chair noted that the current draft will be updated to include any full or partial proposals. All steps on the schedule will be taken, even if the dates are incorrect on the current version of the plan. There will be no shortcuts—a WG ballot will be taken and the approved draft will go to Sponsor ballot. The plan provides a basis to work against.

Chair Greenspan explained that it is important to see how any additional work will align with the current draft. He will continue as if appeals were denied. The Chair would like to provide the opportunity for those who have requested changes to indicate the changes to the draft in working group meetings in the evenings.

Straw Poll Question 1: Move to adopt the revised Project Development Plan.

Moved: Jerry Upton Seconded: Ayman Naguib

Results: 48 Yes, 8 No, 1 Abstain

Time: 11:45 AM

The Chair noted that he expects productive interchange within the working group. The intent is to work together to develop a standard. The Chair retains the right to decide if the option to move to entity or remove voting rights is required to ensure that the working group moves forward.

Session break from 11:55 AM to 1: 10 PM.

Session resumed at 1:15 PM.

Proposal Presentation

A proposal presentation was made by Al Jette, Hao Bi, and John Haug (see C802.20-07/01).

The following were questions by working group members:

(slide 4) Explain FL slot structure Response: Worst case scenario shown

(slide 32) CAZAC/GCL what other properties were considered

Response: PAPR properties; settled on GCL sequence

(slide 35) How does duty cycle affect the efficiency?

Response: Slots are grouped rather than alternating them to reduce the overall guard time

(slide 6) Elaborate on how forward link message would be sent

(slide 35) Your TDD proposal allows for flexible uplink and downlink deployment allocations

Response: Operators may have different traffic needs; it is best to fix the uplink and downlink allocation for the entire system to manage interference

(slide 36) Slide not clear

Response: Will be more clearly developed in full proposal; slide is to give a rough idea of the concept

(slide 20) Second bullet: Elaborate on what is meant by TDM mode; multiple streams to single user

Response: TDM mode means TDM on a particular sub-channel, i.e., transmissions to different users on a sub-channel are time division multiplexed

(slide 26) Multiplex for long and short frames; do you have the same frequency? How multiplex?

Response: More in full proposal

(slide 27) Showing long information

(general slide 4) 3 slots per frame; 1.667 ms

(slide 12) How deal with dedicated pilots (frequency select/distributed resource); how does numerology work with slot structure?

Response: Slide 16 says that there will be dedicated pilots

What is structure of control channels?

Response: Will provide details in full proposal

Session break from 2:40 PM to 3:00 PM

Session resumed at 3:00 PM.

Chair Greenspan noted that the WG would review comments on the draft and that LB1 responses may still be changed during the discussion.

Mark Klerer noted that the LB2 comments are unedited.

A discussion of the comments and responses to rejected LB1 and all LB2 comments ensued.

Comment Resolution

See the IEEE 802.20 Working Group member site for versions of the comment resolution spreadsheet. Final dispositions are shown in M802.20-07/01.

- **LB1, 8, 9, 12:** Pending resolution—Open; subgroup to create text that clarifies two existing modes
- **LB1, 13:** Pending resolution—Open; comment is too general; commenter needs to provide specific changes that would resolve concerns
- **LB1, 14:** Pending resolution—Open; comment is too general; commenter needs to provide specific changes that would resolve concerns
- **LB1, 20:** Pending resolution—Open; commenter needs to provide additional information, e.g., simulations, so that the working group can determine the required changes to the draft
- LB1, 23-25: Resolution—Closed; accepted by commenter
- LB1, 30 (see LB2, 26): Resolution—Closed; accepted by commenter
- **LB1, 35:** Pending resolution—Open; subgroup to review and create text where appropriate
- LB1, 36: Resolution—Closed; accepted by commenter
- LB1, 37: Pending resolution—Open; simulation data requested
- LB1, 39: Pending resolution—Open; simulation data requested
- **LB1, 41:** Pending resolution—Open; subgroup to conduct technical discussion

- **LB1**, **45**: Pending resolution—Open; subgroup to conduct technical discussion
- **LB1, 68:** Pending resolution—Open; Secretary to confirm requirement to have PAR and draft scope and purpose match
- **LB1, 70:** Resolution—Open; subgroup to provide text (see LB1, 8, 9, 12)
- **LB1, 71:** Pending resolution—Open; Secretary to confirm requirement to have PAR and draft scope and purpose match
- LB1, 73: Pending resolution—Open; subgroup to provide text
- LB1, 90: Resolution—Closed; accepted by commenter
- **LB1, 118 (119, 145, 152, 182, 189, 194):** Resolution—Closed; no objection to enriched MAC
- LB1, 174: Pending resolution—Open; accept but request clarifying diagram
- **LB1**, 227: Resolution—Closed; no further comments
- LB1, 238: Pending resolution—Open; subgroup to provide text
- **LB1, 311:** Resolution—Closed; no further comments
- LB1, 343: Resolution—Closed; accepted
- **LB1, 369:** Resolution—Closed; no further comments
- LB1, 378: Pending resolution—Open; commenter to respond
- LB1, 383 (same as 343): Resolution—Closed
- **LB1, 399:** Pending resolution—Open; subgroup to provide text
- **LB1, 402:** Pending resolution—Open; comment is too general; commenter needs to provide specific changes that would resolve concerns
- **LB1, 403:** Resolution—Closed; accepted by commenter
- **LB1, 405:** Resolution—Closed; accepted by commenter
- **LB1, 414:** Resolution—Closed; accepted by commenter
- **LB1**, **425**: Resolution—Closed; accepted by commenter

- **LB1, 452:** Pending resolution—Open; subgroup to provide text
- LB1, 479: Resolution—Closed; accepted by commenter
- LB1, 488: Pending resolution—Open; commenter to respond
- **LB1, 492:** Resolution—Closed; accepted by commenter
- LB1, 530: Resolution—Closed; accepted by commenter
- **LB1, 545:** Pending resolution—Open; subgroup to provide text
- **LB1, 603:** Pending resolution—Open; subgroup to provide text

Session recessed at 5:45 PM.

Minutes of 802.20 Tuesday Jan 16, 2007

Meeting started at 8:35 AM.

The Chair gave an update on the work from the previous evening

- No comments on Requirements document
- Traffic Modeling document will have change proposals
- Will work on other documents with specific proposed changes

LB2 Process Comments

- LB2/1: Resolution—Closed; no objections
- LB2/2: Resolution—Closed; no objections
- LB2/3: Resolution—Closed; no objections
- LB2/4: Resolution—Closed; no objections
- LB2/5: Resolution—Closed; no objections
- **LB2/6:** Resolution—Closed; no objections
- LB2/7: Resolution—Closed; no objections
- LB2/8: Resolution—Closed; no objections
- LB2/9, 10, 11, 12: Resolution—Closed; no objections
- **LB2/13:** Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor
- **LB2/35:** Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor
- LB2/37: Resolution—Closed; no objections
- LB2/41: Resolution—Closed
- **LB2/52:** Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor
- **LB2/53:** Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/55: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/56: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/58: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/60: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/70: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/71: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/73: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2 Technical and Editorial Comments

LB2/9: Resolution—Closed; no objections

LB2/10: Resolution—Closed; addressed by IEEE editors during publication process

LB2/11: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/12: Resolution—Closed; comment is too general; commenter needs to provide specific changes that would resolve concerns

LB2/14: Resolution—Closed; no objection to fully functional MAC

LB2/15: Pending resolution—Open; subgroup to provide text

LB2/16: Pending resolution—Open; subgroup to provide text

LB2/17 and 18: Pending resolution—Open; subgroup to provide text

LB2/19 and 20: Resolution—Closed; poll of WG offered no support for adding 1.25 MHz

LB2/21: Resolution—Closed; accepted by commenter

LB2/22: Resolution—Closed; accepted by commenter

LB2/23: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor

LB2/24: Resolution—Closed; comment is too general; commenter needs to provide specific changes that would resolve concerns

LB2/25: Resolution—Closed; no objections

LB2/26: Resolution—Closed; editorial changes

LB2/27: Resolution—Closed; no objections

LB2/28: Resolution—Closed; copyright information to be reviewed by Chair and IEEE-SA editor; permission responses to be made available to the WG.

LB2/29: Resolution—Closed; no objections

LB2/30: Resolution—Closed; no objections

LB2/31: Resolution—Closed; accepted by commenter

LB2/32: Pending resolution—Open; subgroup to provide text

LB2/33: Resolution—Closed; include in discussion by smaller group to ensure interoperability

LB2/34 (see LB2/15): Resolution—Closed

LB2/36: Pending resolution—Open; subgroup to provide text

LB2/38: Pending resolution—Open; comment is too general; commenter needs to provide specific changes that would resolve concerns

LB2/39: Pending resolution—Open; subgroup to provide text

LB2/40: Pending resolution—Open; comment is too general; commenter needs to provide specific changes that would resolve concerns

Session break from 11:40 PM to 11:50 PM.

Session resumed at 11:55 PM.

LB2/48: Pending resolution—Open; Secretary to confirm requirement to have PAR and draft scope and purpose match

LB2/42 (see LB1, 45): Pending resolution—Open; subgroup to provide text

LB2/43: Pending resolution—Open; comment is too general; commenter needs to provide specific changes that would resolve concerns

LB2/44: Resolution—Closed; accepted by commenter

LB2/45: Pending resolution—Open; data check by Alex

LB2/46: Resolution—Closed

Session break from 12:33 PM to 2:00 PM.

Session resumed at 2:15 PM.

LB2/47: Pending resolution—Open; Anna will provide specific changes to draft

LB2/48: Resolution—Closed

LB2/50: Pending resolution—Open; subgroup to provide text

LB2/51: Pending resolution—Open; subgroup to provide text

LB2/54: Resolution—Closed; no objections to resolution (commenter not present)

LB2/57 (see **LB1/140**): Resolution—Closed; no objections to resolution (commenter not present)

LB2/59: Resolution—Closed; no objections to resolution (commenter not present)

LB2/61: Resolution—Closed; accepted by commenter

LB2/64 and 65: Resolution—Closed; accepted by commenter

LB2/66 (see LB1/369): Resolution—Closed; accepted by commenter

LB2/67: Pending resolution—Open; subgroup to discuss outline and development of second document

LB2/62: Pending resolution— Open; <u>Data on the packet retransmission characteristics to</u> be provided by the proponent

Deleted: subgroup to review input by Anna; Alex to provide simulations

LB2/63: Resolution—Closed; accepted by commenter

LB2/68 (see **LB1/402**): Pending resolution—Open; comment is too general; commenter needs to provide specific changes that would resolve concerns

LB2/69 (see LB2/22): Resolution—Closed; no objections

LB2/72: Resolution—Closed; no objections

LB2/74: Pending resolution—Open; subgroup to provide text

LB2/75: Resolution—Closed; accepted by commenter

LB2/76: Resolution—Closed; accepted by commenter

Session break from 3:15 PM to 3:35 PM

Session resumed at 3:35 PM.

LB2/77 (see LB2/20): Resolution—Closed; no objections

LB2/78: Pending resolution—Open; subgroup to provide text

LB2/79: Pending resolution—Open; verification of refs by commenter

LB2/80: Pending resolution—Open; subgroup to provide text

LB2/81: Pending resolution—Open; subgroup to provide text

LB2/82: Pending resolution—Open; subgroup to provide text

LB2/83: Resolution—Closed; accepted by commenter

LB2/84: Resolution—Closed; accepted by commenter

LB2/87: Pending resolution—Open; review by commenter

LB2/85: Pending resolution—Open; subgroup to provide text

LB2/86: Pending resolution—Open; verification of references

LB2/88: Resolution—Closed; accepted by commenter

LB2/89: Pending resolution—Open; subgroup to provide text

LB2/90: Resolution—Closed; accepted by commenter

LB2/91: Pending resolution—Open; editor to review footnote to include suggested wording where appropriate

LB2/92 and 93: Pending resolution—Open; additional review by commenter

LB2/94 (see LB2/90): Resolution—Closed; accepted by commenter

LB2/95 (see LB1/488): Pending resolution—Open; subgroup to provide text

Deleted: ; review of simulation data

LB2/96 (see LB1/496): Resolution—Closed

LB2/98: Pending resolution—Open

LB2/97 (see LB1/500): Resolution—Closed; accepted by commenter

LB2/99: Pending resolution—Open; additional review by commenter

LB2/100: Resolution—Closed; no objections

LB2/101: Resolution—Closed; accepted by commenter

Session recessed at 6:00 PM.

Minutes of 802.20 Wednesday Jan 17, 2007

Meeting started at 8:00 AM.

Technical discussions to resolve outstanding ballot comments

LB1/403 and 452: Resolution—Closed; new text for footnote submitted by subgroup

LB1/41 and LB2/47: Resolution—Closed; no objections

A presentation on the Simulation Data for Letter Ballot Comments on Quasi-guard Subcarriers and Reverse Link Waveform was given by Anna Tee (see C802.20-07/03).

LB2/78: Pending resolution—Open; pending review of C802.20-07/03

Deleted: 89

LB1/22, LB2/17, LB2/18: Pending resolution—Open pending presentation by subgroup

LB2/39: Pending resolution—Open; pending response from commenter

LB1/488: Pending resolution—Open; pending response from commenter

LB1/238, 378: Pending resolution—Open; awaiting response from commenter

LB1/45 and LB2/42: Pending resolution—Open; pending response from commenter

Deleted: ¶

LB2/78: Pending resolution—Open; pending response from commenter¶

LB2/62: Resolution—Closed; no objections

LB2/91: Resolution—Closed; no objections

LB2/92: Pending resolution—Open; pending response from commenter

LB2/99: Pending resolution—Open; pending response from commenter

Discussion on open items

The following are comments made by working group members:

- Suggest opening a PAR to address performance requirements
- Need transmitter fidelity requirements (fundamental lack in draft)
- Performance requirement usually developed by other constituents under separate process
- Can begin to develop system, and can help with determination of receiver and transmitter technology
- Better off to stabilize air interface then structure minimal requirements for equipment vendors

Resolution—Open; request volunteers to develop PAR and Five Criteria (Jim Tomcik, Joanne Wilson, Jerry Upton)

The Chair noted that the agenda for the evening session would be

- Channel Model discussion
- Progress through comments
 - PAPR related issues
 - LB2/78
 - LLC-PDUs
 - Further open comments

Session break from 12:30 PM to 2:00 PM.

Session resumed at 2:00 PM.

Channel Model changes agreed on by subgroup were presented by Ayman Naguib (see 802.20-07/05).

The Chair confirmed that there were no objections to including the changes as nonsubstantial.

Proposed changes to the Channel Model document were presented by Anna Tee (see C802.20-07/02)

The following comments were made by working group members (see also C802.20-07/04)·

Page 5: Item E, 1st para

- This document was developed before the draft, and assumption was that proposal would come from various companies, so had to allow either MIMO or SISO or other possibilities
- Proposal that was submitted had both MIMO and SISO
- It is not correct that the SCM description is included in the document and not as the model for simulation; during discussion in the working group (March, May, Sep 2005) it was debated while the working group was determining how to come up with the correlation matrix
- Issue was debated several times
- Section 3.6 discusses MIMO and reads, "Non-SISO systems...Section 7." Page 6: Item F

The Chair requested that those who had an interest in SCM indicate their interest. There was no interest indicated by the working group members.

Page 6: item G

- The information can be obtained from link curves
- This is an issue that needs a solution to meet the PAR and ensure that system does not fall apart; we do not expect a user who is moving to have high performance, but we need to ensure that connectivity in maintained. Need reasonable evaluation scenario for this.

Session break from 3:15 PM to 3: 30 PM

Session resumed at 3:30 PM.

Alex Gorokhov presented on Dynamic PA Backoff Techniques and SC-FDMA (see C802.20-07/05).

The following comments were made by working group members:

- Could in-band distortion <u>here</u> be the same as <u>interference as out-of-band emission?</u> Response: If in spectral mask, then fine

Deleted: distortion Deleted: mass

LB2/17 and LB2/18: Pending resolution—Open; pending review of simulation data by commenter

LB2/78: Pending resolution—Open; pending review by commenter

LB1/378: Resolution—Closed; accepted by commenter

LB1/238: Pending resolution—Open; pending review by commenter

LB2/99: Resolution—Open; pending review by commenter

The Chair noted that the Draft PAR and remaining comments will be discussed tomorrow. His intention is to get comment resolution completed at this session.

Session recessed at 6:00 PM.

Minutes of 802.20 Thursday Jan 18, 2007

Meeting started at 9:00 AM.

Chair Greenspan presented the agenda for the day

- Review of Draft PAR
- Completion of comments
- Proposed changes to Evaluation Criteria document

The Chair then made an urgent call for Vice Chair and Secretary.

Review of Draft PAR

The following comments were made by working group members:

5.2 Scope

- Wouldn't this project be more appropriate as a recommended practice rather than a standard?
- The project needs to be a standard to ensure that technology works correctly.
- The project needs to go beyond the current scope; need completion of definition of transmit waveform (transfer fidelity specifications).
- When system is implemented, you will have performance characteristics of transmitter and receiver.
- For the air interface document, if you put in air interface requirement, it would be a fixed number; will have tolerance and measurement margins; fidelity requirements are better in a minimum requirements document.

5.3 Dependency

- Document can be completed from 2 weeks to 6 months after air interface finalized.

5.4 Purpose

No changes.

5.5 Need

No changes.

The Chair noted that the working group reviewed the PAR, made changes, and will review the revised PAR again in March. The working group will need to develop the Five Criteria.

Comment Resolution

- LB2/18: Resolution—Closed; not accepted by commenter
- LB1/45, LB2/42, and LB2/89: Resolution—Closed; not accepted by commenter
- LB2/45: Resolution—Closed; not accepted by commenter
- LB2/12: Resolution—Closed; not accepted by commenter
- LB2/38: Resolution—Closed; not accepted by commenter
- LB2/40: Resolution—Closed; accepted by commenter
- LB2/43: Resolution—Closed; accepted by commenter
- LB2/78: Resolution—Closed; not accepted by commenter
- LB2/80: Resolution—Closed; accepted by commenter
- LB2/81: Resolution—Closed; not accepted by commenter
- LB2/82: Resolution—Closed; accepted by commenter
- LB2/85: Resolution—Closed; accepted by commenter
- LB2/86: Resolution—Closed; accepted by commenter
- LB2/87: Resolution—Closed; not accepted by commenter
- LB2/92: Resolution—Closed; accepted by commenter
- LB2/93: Resolution—Closed; accepted by commenter
- LB2/95: Resolution—Closed; not accepted by commenter
- LB2/98: Resolution—Closed; not accepted by commenter
- LB2/99: Resolution—Closed; accepted by commenter
- LB1/20: Resolution—Closed; not accepted by commenter
- LB2/39: Resolution—Closed; not accepted by commenter

Session break from 10:15 AM to 10:45 AM.

Session resumed at 10:45 AM.

LB1/37: Resolution—Closed; accepted by commenter

LB1/238: Resolution—Closed; accepted by commenter

LB2/32: Resolution—Closed; not accepted by commenter

Mark Klerer noted that the comment sheets would be updated and posted (see M802.20-07/01 in the membership area of the IEEE 802.20 Web site).

The Chair noted that the intent is to allow open discussion and an effort to resolve all issues with regard to the letter ballots and WG documents during this meeting. Going forward, we will not focus on the past issues.

Mark Klerer presented proposed changes to Section 1.2 that was intended to address the 625 MHz issue.

Victor Hou noted that the text currently has entirely separate modes (wideband and 625k-MC), which is an issue of concern. There are a few ways to handle this, but the majority has chosen to maintain the two separate modes.

Proposed Changes to Evaluation Criteria document

Anna Tee presented proposed changes to the Evaluation Criteria document (see C802.20-07/06).

The Chair noted that making these changes in the Evaluation Criteria will require simulations and cause all submittals for the future to not meet the evaluation criteria, which would nullify a lot of the work already done by the WG.

The following comments were made by working group members:

- This is just an appropriate requirement for comparing technologies; vendors will decide how to market the product depending on their decision on the traffic mix
- Reverse link evaluation was noted <u>as insufficient</u> in early ballots; the intent was not to affect the call for proposals; the information was brought forward because of technical concern with inadequacy

- Traffic model was done to facilitate comparison between various types of technology; it was not meant to test traffic deployment

Deleted: not

- Purpose of evaluation is to determine how to manage resources and optimize mix; power could be higher and cause interference; in this example, need to address power control in draft; might not be able to see issues without requiring the simulations
- This was discussed at the Dallas meeting

The Chair noted that the group will go through the presentation then find out from the group if there are any important points that need to be addressed.

Section 4.3.4 FTP and Evaluation of system performance at high mobility

- Why was the current Evaluation Criteria document considered sufficient?
- One buffer and mix was considered sufficient; the information in the document is sufficient to compare technologies; we won't be able to do all the scenarios to satisfy real world needs
- The current proposal was the only one supplied; with one there is no need for further simulation; with new proposals, not having this information could result in a breaking point between the proposals

The Chair noted that the document is the minimal set of proposal. If new proposals exceed the current base, then that might be better for the new proposals.

Session break from 12:25 AM to 2:00 PM.

Session resumed at 2:07 PM.

LB1/8, 9, 12, and 70: Resolution—Closed; not accepted by commenter

LB1/13: Resolution—Closed; not accepted by commenter

LB1/32: Resolution—Closed; accepted by commenter

LB1/35: Resolution—Closed; not accepted by commenter

LB1/39: Resolution—Closed; accepted by commenter

LB1/399: Resolution—Closed; not accepted by commenter

LB1/488: Resolution—Closed; not accepted by commenter

LB1/545: Resolution—Closed; new text provided

LB1/603: Resolution—Closed; new text provided

LB2/16: Resolution—Closed; no objections

Deleted: not accepted by commenter

LB2/17: Resolution—Closed; not accepted by commenter

LB2/36: Resolution—Closed; not accepted by commenter

LB2/50 and LB2/51: Resolution—Closed; new text provided

LB2/67: Resolution—Closed; not accepted by commenter

The estimate is that there will be 17 comments unresolved when completed.

Discussion of Five Criteria to accompany PAR

- Request to include transmit fidelity requirements.

A straw poll was taken to approve the PAR and Five Criteria.

Straw Poll Question 2: Move to approve PAR, including the Five Criteria for confirmation at the March 2007 802 Plenary, for ultimate submission to the 802 EC for approval by the IEEE-SASB

Moved: Nancy Bravin Seconded: Jim Tomcik

Results: 34 Yes, 0 No, 8 Abstain

Time: 2:35 PM

Anna Tee noted that the changes to the Channel Models document should be considered by the WG.

The Chair noted that the Channel Models document changes are clarifications and will not need additional actions. The working group was asked whether changes were substantial and the members agreed that the changes were not. The Chair then determined that the changes were editorial.

Chair Greenspan then made a call for Vice-Chair and Secretary.

Meetings for Friday, 19 January 2007 were cancelled.

Move to adjourn: Nancy Bravin Seconded: Alex Gorokhov Adjourn 2:55 PM

Appendix A-1

Overall Session Attendance and Participation Credit

	Α	В	J	K	Р	Q	R	S	Т	U	W	Х	Υ
1	Last Name	First Name	Jan07 Voters	Mar07 Voters*	July05	Sept05	Nov05	Jan06	Mar06	May06	Nov 06	Jan07	Mar 07
2	Agis	Edward	М	М			1	1	1	1	1		
3	Agrawal	Avneesh	М	М			1	1	1				
4	Ahmadi	Sassan	М	М			1		1	1	1	1	
5	Ahn	Jae Young	М	М			1	1	1	1			
6	Alamouti	Siavash	М	М			1	1	1	1			
7	Alder	Larry	М	No									
8	Ali	Murtaza	М	М			1	1	1				
9	Alphonse	Jean	М	М			1	1	1				
10	Arefi	Reza	М	М			1	1	1	1			
11	Austin	Mark	No	No		1							
12	Bajaj	Rashmi	M New	M New					1		1		
13	Barriac	Gwen	M	M	1	1	1	1	1			1	
14	Basu	Saswata	M New	No				1	1				
15	Batin	Colin	No	No	_		_		_				
16	Baum	Kevin	M New	No			1			1			
17	Bavafa	Moussa	М	M					1	1	1		
18	Bentov	Izhar	No	No			1						
19	Bernstein	Jeffrey	М	М	1	1	1	1	1		1	1	
20	Bi	Нао	No	No									
21	Bogenfeld	Eckard	No	No					1				
22	Bravin	Nancy	М	М	1	1	1	1	1		1	1	
23	Burbank	Jack	No	No				1					
24	Bussey	Chris	M	M	1	1	1	1	1		1	1	
25	Cai	Sean	М	No			1	1	1				
26	Canchi	Radhakrishna	М	М	1	1	1	1	1	1	1	1	
27	Carlo	Jim	M	M			1	1	1				
28	Carneiro	Edson	M	No	1	1		1	1				
29	Carson	Peter	M	M		1	1	1	1			1	
30	Castell	Harold P.	М	М	1	1	1	1	1		1		
31	Chae	Suchang	M New	M New					1	1			
32	Chang	Young Bin	M New	No					1	1			
33	Chen	Michael	No	No			1						
34	Chen	Yao	No	No						1			
35	Chickneas	Jim	М	No	1	1	1	1	1				
36	Chion	Hua Mary	М	No			1	1	1				
37	Cho	Juphil	М	М				1	1		1		
38	Cho	Jaeweon	No	No				1					
39	Cho	Soonmi	M New	No					1	1			
40	Choi	Hyoungjin	M New	M New				1	1				
41	Choi	JoonYoung	No	No				1					
42	Choi	Yang-Seok	М	М			1	1	1	1			
43	Choi	Yun	No	No					1				
44	Chong	Chia-Chin	M New	M New			1	1		1		1	
45	Choo Eng	Үар	No	No									
46	Chun	Jin Young	М	М		1	1	1	1				
47	Chung	Jaeho	М	M				1	1		1		
	Cleveland	Joseph	M	M			1	1			1		
								·					

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49 Comstock David M New M New No No No No No No No N	1
51 Dean Chris M M 1 <td< td=""><td>1</td></td<>	1
52 Dhaliwal Upkar No No	1
53 Dodd Donald M M 1	1
54 Dorward Lynne M M 1	1
55 Dunn Doug M M M 1	1
56 Eilts Henry M M 1 <t< td=""><td>1</td></t<>	1
57 El-Rayes Mohamed M New No No 58 Entzminger Lindell No No 59 Epstein Mark M M 1	1
58 Entzminger Lindell No No	1
59 Epstein Mark M M 1 <	1
60 Feder Peretz M M M 1 <td< td=""><td>1</td></td<>	1
61 Ferguson Alistair M M 1 1 1 1 62 Fong Mo-Han No No 1 <t< td=""><td></td></t<>	
62 Fong Mo-Han No No 1	
63 Freeland Graham M M 1 1 1 1 1 64 Gal Dan M M 1 1 1 1 1 65 Garcia-Alis Daniel M M 1 1 1 1 1 1 66 Garg Deepshikha M M 1 1 1 1 1 1 67 Giles Arthur M No 1 1 1 1 1 1	
64 Gal Dan M M 1 1 1 1 1 65 Garcia-Alis Daniel M M 1 1 1 1 1 66 Garg Deepshikha M M 1 1 1 1 1 1 67 Giles Arthur M No 1 1 1 1 1 1	
65 Garcia-Alis Daniel M M 1 1 1 1 1 66 Garg Deepshikha M M 1 1 1 1 1 1 67 Giles Arthur M No 1 1 1 1 1 1	1
66 Garg Deepshikha M M 1 1 1 1 1 67 Giles Arthur M No 1 1 1 1 1	1
67 Giles Arthur M No 1 1 1 1	1
68 Gomes Eladio M M 1 1 1 1 1	
69 Gore Dhananjay M M 1 1 1	1
70 Gorodetsky Svetlana M M 1 1 1 1	+
71 Gorokhov Alexei M M 1 1 1	1
72 Greenspan Arnie M M 1	1
73 Gunduzhan Emre No No 1	
74 Guo Qiang M M 1 1 1 1	
75 Habab Zion No No 1	
76 Han Youngnam No No 1	+
77 Hatakawa Yasuyuki No No 1	_
78 Haug John No No	1
79 Ho Jin-Meng M No 1 1 1	
80 Hong Songnam M New No 1 1	
81 Hou Victor M M 1 1 1 1 1 1 1	1
82 Howard Fred M No ! 1 1 1	
83 Hu Rose M M 1 1 1 1	
84 Hu Teck M M 1 1 1	1
85 Huang Haiming No No 1	+
86 Humbert John M New M New 1 1	+
87 Huo David M M 1 1 1 1	1
88 Hur Yerang M New M New 1 1	
89 lbbetson	+
90 limuro Kazuyoshi M M 1 1 1 1	1
91 Ikeda Yutaka No No 1	
92 Ishida Kazuhito No No	1
93 Ishikawa Hiroyasu No No 1	
94 Jeong Moo Ryong No No 1	
95 Jeong Byung-Jang M M 1 1 1 1	

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	Α	В	J	K	Р	Q	R	S	Т	U	W	Х	Υ
96	Jette	Alan	М	М			1	1	1	1	1	1	
97	Ji	Baowei	М	М					1	1	1		
98	Ji	Tingfang	М	М			1	1	1		1	1	
99	Johnson	Brian	No	No			1						
100	Jones	Dennis	М	М	1	1	1	1	1				
101	Joo	Pan Yuh	No	No				1		1			
102	Kadous	Tamer	М	М			1	1	1		1	1	
103	Kalhan	Amit	М	М			1	1	1		1	1	
104	Kanai	Takeo	No	No							1		
105	Kang	Hyunjeong	M New	M New				1	1				
106	Kasch	William	M	No		1	1	1	1				
107	Katayama	Masahide	No	No							1		
108	Khademi	Majid	М	М	1		1	1	1		1		
109	Khan	Farooq	No	No				1					
110	Khandekar	Aamod	М	М			1	1	1		1	1	
111	Khatibi	Farrokh	М	М	1		1	1	1		1	1	
112	Kiernan	Brian	М	М		1	1	1	1	1			
113	Kim	Beomjoon	No	No			1						
114	Kim	Hyeon Soo	М	М					1	1	1		
115	Kim	Jae-Ho	M New	M New					1	1			
116	Kim	Joonsuk	No	No					1				
117	Kim	Peter J.W.	M New	M New				1	1				
118	Kim	Tae Young	М	М					1	1	1	1	
119	Kim	Yong Ho	М	М			1	1	1		1		
120	Kim	Young-Ho	M New	M New				1	1	1		1	
121	Kim	Young Kyun	М	М				1	1		1		
122	Kim	Youngsoo	М	М					1	1	1		
123	Kim	Kanghee	No	No				1					
124	Kimura	Shigeru	М	М			1	1	1		1		
125	Kitahara	Minako	М	М	1		1	1	1		1	1	
126	Kitamura	Takuya	M New	M New			1	1		1			
127	Klerer	Mark	М	М	1	1	1	1	1	1	1	1	
128	Knisely	Douglas	М	М			1	1	1	1	1		
129	Knowles	Skip	No	No									
130	Ko	Young-Jo	М	No			1	1					
131	Kogianitis	Achilles	No	No									
132	Kolze	Tom	М	М					1	1	1		
133	Koo	Changhoi	М	М			1	1	1	1	1		
134	Koplyay	Ferenc	M New	M New					1	1			
135	Kujawski	Fred E.	No	No							1		
136	Kwon	Dong Seung	M New	M New			1	1		1			
137	Kwon	Jae Kyun	No	No			1						
138	Kwon	Young Hyoun	М	М			1	1	1				
139	Lalaguna	Pablo	M	М	1	1	1	1	1		1		
140	Lawrence	Lisa	М	М	1		1	1	1				
141	Lee	Heesoo	М	М			1	1	1	1	1	1	
142	Lee	Jungwon	M New	M New				1	1				
143	Lee	Mihyun	М	М	<u>L</u>			1	1		1	1	

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	Α	В	J	K	Р	Q	R	S	Т	U	W	Х	Υ
144	Lee	Sungjin	M New	M New				1	1				
145	Lee	Wook-Bong	М	М			1	1	1	1			
146	Lestable	Thierry	M New	No					1	1			
147	Li	Jaing	No	No			1						
148	Li	Jun	M New	M New		1	1			1			
149	Li	Thomas	No	No				1		1			
150	Li	Yingyang	М	М					1	1	1		
151	Lim	Hyoung Kyu	М	М			1	1	1	1			
152	Lin	Jiezhen	М	М	1		1	1	1	1			
153	Liu	Walter	M New	M New					1	1			
154	Livshitz	Michael	No	No					1				
155	Loh	Lee Ying	No	No									
156	Lozano	Angel	No	No			1						
157	Lu	Jianmin	No	M New			1	1		1			
158	Ма	Steven	М	М			1	1	1	1			
159	Maez	Dave	No	No									
160	Martynov	Irina	М	М	1	1	1	1	1		1	1	
161	Martynov	Michael	М	М	1	1	1	1	1		1	1	
162	McGinniss	David	M New	M New				1	1				
163	McMahon	Anthony	М	М			1	1	1		1	1	
164	McMillan	Donald	М	М	1	1	1	1	1		1		
165	Miyazono	Max	М	М	1		1		1		1		
166	Modlin	Cory	No	No			1						
167	Mollenauer	James	M	М	1	1	1	1	1	1	1		
168	Murakami	Kazuhiro	М	M	1		1	1	1		1		
169	Murphy	Peter	М	M			1	1	1				
170	Naaman	Laith	M New	M New				1	1				
171	Nabar	Rohit	М	M				1	1		1		
	Nagai	Yukimasa	M New	M New			1		1				
	Naguib	Ayman	M	M	1	1	1	1	1			1	
	Naidu	Mullaguru	M	M	1		1	1	1		1	1	
	Nakamura	Kenichi	M	M				1	1		1		
	Nakamura	Tetsuya	M	M			1	1	1		1	1	
	Nakano	Shinji	M	M			1	1	1		1	1	
	Nguyen	Nha	M	M	1	1	1	1	1		1	1	
	Nicolas	Julien	M	No			1	1	1				
	Noh	Taegyun	M	M					1	1	1		
181	Novick	Fred	M	M	1	1	1	1	1		1		
	O'Brien	Francis	M New	M New			1	1				1	
	Odlyzko	Paul	М	M			1	1	1	1			
	Oguma	Hiroshi	М	M			1		1	1	1		
185		Changyoon	M New	M New					1	1			
	Ovadia	Shlomo	No	No						1			
	Panicker	John	M New	M New					1	1			
	Park	Chul	M	M				1	1	1	1		
	Park	DS	M	M					1	1	1		
	Park	Jeongho	M	M					1	1	1		
191	Park	Won-Hyoung	M	M			1	1	1	1			

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	Α	В	J	K	Р	Q	R	S	Т	U	W	Х	Υ
192	Patzer	Steve	М	М			1	1	1	1			
193	Perini	Patrick	M	No			1	1	1				
404	D'	_	.,	.,									
	Pfann	Eugen	M	M			1	1	1		1	1	
	Ping Pirhonen	Luo Riku	M M	No M	4	1	1	1	1	4	1		
			M New	M New	1	1		1	1	1	1		
	Pittampalli Poisson	Eshwar Sebastien	M	M	1	1	1	1	1		1		
						1	1	1			1		
199	Polcari	Amy	M	No	1			1	1				
200	Polsgrove	Jim	M	No	1	1	1	1	1				
201	Prakash	Rajat	M	M	1	1	1	1	1	1	1	1	
202	Preece	Rob	M	M	1	1	1	1	1		1	1	
203	Priebe	Russell	No	No									
204	Pulcini	Gregory	No	No									
205	Puthenkulam	Jose	M	M			1	1	1	1			
206	Qian	Xiaoshu	М	М			1	1	1	1			
207	Ragsdale	James	М	М	1		1	1	1	1	1		
208	Rajadurai	Rajavelsamy	M New	M New					1	1			
209	Rajkumar	Ajay	M	M	1	1	1	1	1	1			
210	Razoumov	Leonid	M New	No				1	1				
211	Salminen	Reijo	M New	No			1		1				
212	Sampath	Hemanth	M	M			1	1	1		1	1	
213	Sano	Masato	M	M		1	1	1	1		1	1	
214	Santhanakrishnan	Anand	M New	M New					1	1			
215	Sasaki	Shigenobu	М	М					1	1	1		
216	Semper	Bill	No	No						1			
217	Seo	Bangwon	М	М					1	1	1		
218	Shabtay	Ophir	No	No				1					
219	Shasha	Eli	No	No				1					
220	Shepard	Johnny	No	No		1							
221	Shields	Judy	М	М	1	1	1	1	1				
222	Shively	David	М	М			1		1		1		
	1	Hiryuki	No	No						1			
		Takashi	М	М				1	1	1	1		
			М	М					1	1	1		
	Sivanesan	Gyung Chul Kathiravetpilla i	M	M				1	1		1		
	Son	Jungje	No	No				1			'		
		,							_				
228	Son	Yeongmoon	M	No			1	1	1	1			
		Young Seog	М	M					1	1	1		
230	Sorensen	Henrik	M New	M New				1	1				
<u>2</u> 31	Springer	Warren	М	M	1		1		1				
	Srinivasan	Roshni	М	М					1	1	1	1	
233	Staver	Doug	М	М	1	1	1		1				
	Stone	Mike	No	No									
		Richard	М	М				1	1	1	1		
236		David	No	No					1				
		Changho	M	No			1	1	1	1			
_													

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	А	В	J	K	Р	Q	R	S	Т	U	W	Х	Υ
238	Suh	Mark	М	М					1	1	1	1	
239	Surcobe	Valentin	М	М		1			1	1	1		
240	Sutivong	Arak	M	No			1	1					
241	Suzuki	Tomohiro	М	М			1	1	1		1	1	
242	Tamaki	Satoshi	No	No				1					
243	Tan	Teik-Kheong	No	No							1		
244	Tang	Xiangguo	M New	No				1	1				
245	Teague	Harris	М	М			1	1	1		1	1	
246	Tee	Lai-King Anna	М	М			1	1	1	1	1	1	
247	Tomcik	James	М	М	1	1	1	1	1	1	1	1	
248	Toro	Steven	M	No				1					
249	Trick	John	М	No	1	1	1	1	1				
250	Ulupinar	Fatih	М	М			1	1	1				
251	Upton	Jerry	М	М	1	1	1	1	1	1	1	1	
252	Vaidya	Rahul	M New	M New					1	1			
253	Valbonesi	Lucia	М	М			1	1	1	1			
254	Valls	Juan Carlos	М	М	1	1	1	1	1		1	1	
255	Vijayan	Rajiv	М	М			1	1	1		1	1	
256	Vivanco	Silvia	M	M	1		1		1		1	1	
257	Wan	Jane	No	No					1				
258	Wasilewski	Thomas	М	М	1	1		1	1		1		
259	Watanabe	Fujio	M New	M New		1	1						
260	Wieczorek	Alfred	M	M	1		1	1		1			
261	Wilson	Joanne	M	M	1		1	1	1	1	1	1	
262	Wu	Gang	M	No	1		1		1				
263	Wu	Geng	M New	M New			1		1	1			
264	Yaghoobi	Hassan	M	М			1	1	1	1			
265	Yallapragada	Rao	M	М			1	1	1		1	1	
266	Yeh	Choongil	М	М			1	1	1	1	1		
267	Yin	Hujun	М	М			1	1	1	1			
268	Yoo	Do-Sik	No	No				1					
269	Yoon	Young C.	No	No			1						
270	Youssefmir	Michael	М	М	1	1	1	1	1		1		
271	Yuda	Tetsuya	М	М	1	1	1	1	1				
272	Yun	Jungnam	M New	M New					1	1			
	Yuza	Masaaki	М	М			1				1		
274	Zhu	Chenxi	No	No				1					
275	Zhu	Peiying	M New	M New			1		1				
276	*	Shaded blue in	dicates loss of me	mbership status									

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Appendix A-2

Declaration of Affiliations

802.20 Declarations of Affiliation

					Ultimate Parent of	Ultimate Parent of	
0	Last Name	First Name	Employer	Affiliation	Employer	Affiliation	URL1
1	Agis	Ed	Intel Corporation	Same	Not Applicable	Not Applicable	www.intel.com
2	Agrawal	Avneesh	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	www.qualcomm. com
3	Ahmadi	Sassan	Intel Corporation	Intel Corporation	Intel Corporation	Intel Corporation	www.intel.com
4	Ahn	Jae Young	ETRI	Same	N/A	N/A	www.etri.re.kr
5	Alamouti	Siavash M.	Intel Inc.	Same	N/A	N/A	www.intel.com
6	Ali	Murtaza	Texas Instruments, Inc.	Same	Not Applicable	Not Applicable	www.ti.com
7	Alphonse	Jean R.	Lucent Technologies	Same	Not Applicable	Not Applicable	
8	Alsaleh	Haggar	Consultant	Same	Not Applicable	Not Applicable	
9	Arefi	Reza	Intel Corporation	same	same	same	www.intel.com
10	Bajaj	Rashmi	France Telecom R&D	same	Orange Ftgroup	OrangeFTGroup	www.francetelecom.com/en
11	Barriac	Gwen	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	www.qualcomm. com
12	Bavafa	Moussa	Broadcom Corporation	Same	Not Applicable	Not Applicable	www.broadcom.com
13	Bernstein	Jeff	Telecommunications Management Group, Inc.	QUALCOMM, Incorporated	Not Applicable	Not Applicable	www.tmgtelecom.com
14	Bravin	Nancy	Self	Qualcomm		Qualcomm	
15	Bussey	Chris J.	Bussey Consulting Services, Inc.	Qualcomm	Chris J Bussey	Not Applicable	www.qualcomm. com
16	Cai	Sean	ZTE USA Inc.	Same	ZTE Corp	Not Applicable	www.zteusa.com
17	Canchi	Radhakrishna	Kyocera Telecommunications Research Corporation.	Same	Kyocera Corporation.	Kyocera Corporation	www.ktrc-na.com
18	Carlo	Jim	J.Carlo Consulting LLC	Huawei Technology	Not Applicable	Not Applicable	www.huawei.com
19	Carson	Peter	Qualcomm, Inc.	Same	Not Applicable	Not Applicable	
20	Castell	Harold P.	Bussey Consulting Services, Inc.	Qualcomm	Chris J Bussey	Not Applicable	www.qualcomm. com
175	Chae	Suchang	ETRI(Electronics and Telecommunications Research Institute)	Same	Not Applicable	Not Applicable	www.etri.re.kr

21	Chen	Yao	Beijing Samsung Telecommunication	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
22	Cho	Juphil	Kunsan National University	Same	Not Applicable	Not Applicable	www.kunsan.ac.kr
23	Choi	Hyoungjin	TTA	same	Not Applicable	Not Applicable	www.tta.or.kr
24	Choi	Yang-Seok	Intel Corporation	Same	NA	NA	URL:www.intel.com
25	Chong	Chia-Chin	DoCoMo USA Labs	Same	NTT DoCoMo	N/A	www.docomolabs-usa.com
26	Chun	Jin Young	LGE	Same	Not Applicable	Not Applicable	www.lge.com
27	Chung	Jaeho	KT Corporation	Same	Not Applicable	Not Applicable	www.kt.co.kr
28	Cleveland	Joseph	Samsung Telecommunications America, LLP	Same	Samsung Electronics Company	Not Applicable	www.samsungtelecom.com
29	Comstock	David	Huawei Technologies Co,Ltd	Same	Not Applicable	Not Applicable	www.huawei.com
30	Crozier	Eugene	SR Telecom Inc	Same	Not Applicable	Not Applicable	www.srtelecom.com
31	Dean	Christopher	Telecommunications Management Group, Inc. (TMG)	Qualcomm, Inc.	Not applicable	Not applicable	www.tmgtelecom.com
32	Dhaliwal	Upkar	Future Wireless Technologies, L.P.	Same	Not Applicable	Not Applicable	
33	Dodd	Don	Morningstar Mergers	same	N/a	N/a	Mstarmgt@aol.com
34	Dorward	Lynne	LADCOMM Corporation	SAME	Not applicable	Not applicable	www.ladcomm.com*
35	Dunn	Doug	Kyocera Telecommunications Research Corporation	Same	Kyocera Corporation	Kyocera Corporation	www.ktrc-na.com
36	Eilts	Hank	Texas Instruments, Inc.	Same	Not Applicable	Not Applicable	www.ti.com
37	Epstein	Mark	Qualcomm	same	NA	NA	www.qualcomm.com
38	Feder	Peretz	Lucent Technologies	Bell Laboratories	Lucent Technologies	NA	www.lucent.com
39	Ferguson	Alistair	Selbourne Associates	Same	Not Applicable	Not Applicable	
40	Fong	Mo Han	Nortel	Same	Not Applicable	Not Applicable	www.nortel.com
41	Freeland	Graham	Steepest Ascent Ltd	same	Not Applicable	Not Applicable	www.steepestascent.com
42	Gal	Dan	Lucent Technologies	same	Not Applicable	Not Applicable	www.lucent.com
43	Garcia-Alis	Daniel	Steepest Ascent Ltd	same	Not Applicable	Not Applicable	www.steepestascent.com

44	Garg	Deepshikha	Kyocera Telecommunications Research Corporation.	Same	Kyocera Corporation.	Kyocera Corporation	www.ktrc-na.com
45	Gil	Gye-Tae	КТ	Same	Not Applicable	Not Applicable	http://www.kt.co.kr/kthome/eng/inde x.jsp
158	Gomes	Eladio Rodrigues	EPEC Solutions Inc.	Qualcomm Brazil		Qualcomm	www.epecsolutions.com
46	Gore	Dhananjay	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm. com
47	Gorodetsky	Svetlana	Gorodetsky Consulting	same	Not applicable	Not applicable	
48	Gorokhov	Alex	Qualcomm Inc.	Same	Not Applicable	Not Applicable	www.qualcomm.com
49	Greenspan	Arnie	AROSCO Inc.	Same	Not Applicable	Not Applicable	
50	Guo	Qiang	Motorola, Inc.	Same	Not Applicable	Not Applicable	www.motorola.com
	Haug	John	Motorola, Inc.	Same	Not Applicable	Not Applicable	www.motorola.com
	Hou	Victor	Broadcom Corporation	Same	Not Applicable	Not Applicable	www.broadcom.com
53	Hu	Rose	Nortel Networks	Same	Not Applicable	Not Applicable	www.nortel.com
54	Hu	Teck	Siemens Network LLC	Same	Siemens AG	Siemens AG	www.siemens.com
55	Humbert	John	Sprint Corporation	Same	Not Applicable	Not Applicable	www.sprint.com
56	Huo	David	Lucent Technologies	Same	Not Applicable	Not Applicable	www.lucent.com
57	Hur	Yerang	POSDATA Co. Ltd.,	Same	Not Applicable	Not Applicable	www.posdata.co.kr
58	Ibbetson	Luke	Vodafone Group Services Limited	same	not applicable	Not Applicable	www.vodaphone.com
59	limuro	Kazuyoshi	Kyocera corporation	Same	Not Applicable	Not Applicable	www.kyocera.co.jp
60	Ikeda	Yutaka	Sharp Corp	same	not applicable	not applicable	sharp-world.com
61	Ishida	Kazuhito	Qualcomm Inc.	same	Not applicable	Not Applicable	www.qualcomm.com
62	Jeong	Byung Jang	ETRI	Same	Not Applicable	Not Applicable	www.etri.re.kr
63	Jette	Al	Motorola, Inc.	Same	Not Applicable	Not Applicable	www.motorola.com
	Ji	Baowei	Samsung Telecommunications America, LLP	Same	Samsung Electronics Company	Not Applicable	http://www.samsungtelecom.com/
65	Ji	Tingfang	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm.com
66	Jones	Dennis	Taliesen North Consulting	Same	Not Applicable	Not Applicable	
	Joo	Panyuh	Samsung Electronics	Same	Samsung Electronics	Not Applicable	www.samsung.com

68	Kadous	Tamer	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm. com
69	Kalhan	Amit	Kyocera Telecommunications Research Corporation	Same	Kyocera Corporation	Kyocera Corporation	www.ktrc-na.com
70	Kanai	Takeo	Symbies, Inc.	Softbank BB Corp.	N/A	N/A	http://www.symbies.com/
71	Kang	Hyunjeong	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
72	Katayama	Masahide	Kyocera Corp	same	not appliciable	Not Applicable	www.kyocera.co.jp
73	Kawabata	Hiro	Qualcomm	Same	not Applicable	Not Applicable	http://www.qualcomm.com
74	Khademi	Majid	Khademi Consulting	Khademi Consulting	Not Applicable	Not Applicable	
75	Khandekar	Aamod	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm. com
76	Khatibi	Farrokh	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm.com
77	Kiernan	Brian	Interdigital Communications Corp	same	not applicable	Not Applicable	www.interdigital.com
78	Kim	Hyeon Soo	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
79	Kim	Jae-Ho	ETRI	Same	Not Applicable	Not Applicable	www.etri.re.kr
80	Kim	Peter	TTA	same	Not Applicable	Not Applicable	www.tta.or.kr
81	Kim	Taeyoung	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
82	Kim	Yong Ho	LGE	Same	Not Applicable	Not Applicable	www.lge.com
83	Kim	Young Ho	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
84	Kim	Young Kyun	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
85	Kim	Youngsoo	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
86	Kimura	Shigeru	Kyocera Corp.	Same	Not Applicable	Not Applicable	www.kyocera.co.jp
118	Kitahara	Minako	Kyocera Corp.	Same	Not Applicable	Not Applicable	www.kyocera.co.jp
87	Kitamura	Takuya	Fujitsu Limited	Same	Not Applicable	Not Applicable	www.fujitsu.com
	Klerer	Mark	QUALCOMM Flarion Technologies	Same	QUALCOMM, Incoroporated	Not Applicable	http://www.qualcomm.com/qft/
89	Knisely	Douglas	Airvana, Inc.	Same	Not Applicable	Not Applicable	www.airvana.com

	Kolze	Tom	Broadcom	same	Not applicable	Not applicable	Broadcom.com
90							
	Koo	Changhoi	Samsung	Samsung Electronics	Same	Same	www.samsungtelecom.com
			Telecommunications				
91			America, LLP				
92	Koplyay	Ferenc	Freescale Semiconductor	Same	N/A	N/A	www.freescale.com
93	Kujawski	Fred	AirCell Inc.	Same	Not Applicable	Not Applicable	www.aircell.com
94	Kwon	Dong-Seung	ETRI	same	Not applicable	Not applicable	www.etri.re.kr
95	Kwon	Young-Hyoun	LGE	Same	Not Applicable	Not Applicable	www.lge.com
96	Lalaguna	Pablo	MedStar Systems, LLC	Qualcomm		Qualcomm	www.medstarsystems.com
97	Lawrence	Lisa	CTCI	СТСІ	Not applicable	Not applicable	Lisa.lawrence@ctci.ca
98	Lee	Heesoo	ETRI	Same	Not Applicable	Not Applicable	www.etri.re.kr
99	Lee	Jungwon	Marvell Semiconductor Inc	Same	Marvell Technology Group, Ltd	Not Applicable	www.marvell.com
100	Lee	Mihyun	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
101	Lee	Sungjin	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
102	Lee	Wook-Bong	LGE	Same	Not Applicable	Not Applicable	www.lge.com
103	Li	Jun	Nortel Networks, Inc.	Same	Nortel Networks, Inc.	Not Applicable	www.nortel.com
104	Li	Thomas	Huawei Technologies Co,Ltd	Same	not applicable	Not Applicable	http://www.huawei.com
105	Li	Yingyang	Beijing Samsung Telecommunication	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
106	Lim	Hyoung Kyu	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
107	Lin	Jiezhen	Siemens Network Ltd, Beijing	Siemens Ltd., China	Siemens AG	Siemens AG	www.siemens.com.cn
108		Walter	FutureWei Technologies, In	Same	Huawei Technologies Co.,Lt	N/A	www.futurewei.com
109	Lo	Titus	Neocific, Inc.	Same	N/A	N/A	
110	Lu	Jianmin	FutureWei Technologies, In	Same	Huawei Technologies Co.,Lt	N/A	www.futurewei.com
111	Ma	Steve	Freescale Semiconductor	Same	N/A	N/A	www.freescale.com
112	Maez	David	Navini Networks	Same	Not Applicable	Not Applicable	www.navini.com
113	Martynov	Irina	Belgud International	Qualcomm		Qualcomm	
114	Martynov	Michael	Belgud International	Qualcomm		Qualcomm	

115	McGinniss	David S.	Sprint Nextel	Same	Not Applicable	Not Applicable	www.sprint.com
	McMahon	Anthony	Institute for System Level Integration	Strathclyde University	Not applicable	Not applicable	www.sli-institute.ac.uk
117	McMillan III	Donald C.	Advanced Network Technical Solutions, Inc.	Same	N/A	N/A	www.antsinc.com
118	Miyazono	Max	Qualcomm Inc	Same	Not Applicable	Not Applicable	www.qualcomm.com
119	Mollenauer	Jim	Technical Strategy Associates	Motorola Inc.	Not applicable	Not Applicable	Technicalstrategy.com
120	Murakami	Kazuhiro	Kyocera Corporation	Same	Not Applicable	Not Applicable	www.kyocera.co.jp
121	Murphy	Peter A.	Intel Corp.	Same	Not applicable	Not applicable	www.intel.com
122	Naaman	Laith	Intel Corp.	Same	Not Applicable	Not Applicable	www.intel.com
123	Nabar	Rohit	Marvell Semiconductor Inc	Same			www.marvell.com
124	Nagai	Yukimasa	Mitsubishi Electric	Same	Not Applicable	Not Applicable	http://www.mitsubishielectric.co.jp/
125	Naguib	Ayman	Qualcomm Inc.	Same	Not Applicable	Not Applicable	www.qualcomm.com
126	Naidu	Mullaguru	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm. com
127	Nakamura	Kenichi	Fujitsu Limited	Same	Not Applicable	Not Applicable	www.fujitsu.com/global/
128	Nakamura	Tetsuya	NTT MCL Inc.	same	NTT Corp.	Not Applicable	www.nttmcl.com
129	Nakano	Shinji	Kyocera Corp.	Same	Not Applicable	Not Applicable	www.kyocera.co.jp
130	Navidi	Pierre	XG Stream Ltd	OAK GLOBAL SA	Not Applicable	Not Applicable	
131	Ngo	Chiu	Samsung Electronics	Same	N/A	N/A	www.samsung.com
132	Nguyen	Nha	Bussey Consulting Services, Inc.	Qualcomm	Chris J Bussey	Not Applicable	www.qualcomm.com
133	Noh	Taegyun	ETRI	Same	Not Applicable	Not Applicable	www.etri.re.kr
134	Novick	Fred	Bussey Consulting Services, Inc.	Qualcomm	Chris J Bussey	Not Applicable	www.qualcomm.com
135	O'Brien	Francis E.	Lucent Technologies	Same	Lucent Technologies	Not applicable	www.lucent.com
136	Odlyzko	Paul	Motorola	same	Not Applicable	Not Applicable	

137	Oguma	Hiroshi	Industrial Technology Institute Miyagi Prefecture Government	Tohuku University	Not Applicable	Not Applicable	http://www.mit.pref.miyagi.jp
138	Oh	Changyoon	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
139	Oprescu	Val	Motorola, Inc.	Same	Not Applicable	Not Applicable	www.motorola.com
140	Palanivelu	Arul	Marvell Semiconductor Inc	Same			www.marvell.com
141	Panicker	John	NORTEL	Same	Not Applicable	Not Applicable	www.nortel.com
142	Park	Chul	ETRI(Electronics and Telecommunications Research Institute)	Same	Not Applicable	Not Applicable	www.etri.re.kr
143	Park	DS	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
144	Park	Jeongho	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
145	Park	Won-Hyoung	SK Telecom	Same	Not Applicable	Not Applicable	www.sktelecom.com
146	Patzer	Steve	Intel Corp.	SAME	Not Applicable	Not Applicable	
147	Pfann	Eugen	University of Strathclyde	same	not applicable	not applicable	www.strath.ac.uk
148	Pirhonen	Riku	Nokia Oyj	Same	Not Applicable	Not Applicable	www.nokia.com
149	Pittampalli	Eshwar	Lucent Technologies	Same	Not Applicable	Not Applicable	www.lucent.com
150	Poisson	Sebastien	Oasis Wireless Inc	Same	N/A	N/A	www.oasiswireless.net
151	Prakash	Rajat	Qualcomm Inc	Same	Not Applicable	Not Applicable	www.qualcomm.com
152	Preece	Rob	Bussey Consulting Services, Inc.	Qualcomm	Chris J Bussey	Not Applicable	www.qualcomm.com
153	Puthenkulam	Jose	Intel Corporation	Same	Not Applicable	Not Applicable	http://www.intel.com
154	Qian	Xiaoshu	Intel Corporation	Same	N/A	N/A	www.intel.com
155	Ragsdale	Jim	Ericsson Inc	Telefon AB - L.M. Ericsson	Telefon AB - L.M. Ericsson	same	http://www.ericsson.com/us
156	Rajadurai	Rajavelsamy	Samsung India Software Operations Private Limited	Same	Samsung Electronics Company	Same	http://www.samsungindiasoft.com
157	Rajkumar	Ajay	Lucent Technologies Inc.	Same			www.lucent.com

	Sampath	Hemanth	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	
158		N4 4 -	16	0	Nia CARRETT AND A	Niet Assellandia	
159	Sano	Masato	Kyocera Corp.	Same	Not Applicable	Not Applicable	www.kyocera.co.jp
	Santhanakrishn	Anand	Samsung India Software	Same	Samsung Electronics	Same	http://www.samsungindiasoft.com
160	an		Operations Private Limited		Company		
	Sasaki	Shigenobu	Niigata University	Same	Not applicable	Not Applicable	www.niigata-u.ac.jp
162	Seo	Bangwon	ETRI	Same	Not Applicable	Not Applicable	www.etri.re.kr
163	Shields	Judy	Ladcomm	same	NA	NA	
	Shively	David	Cingular Wireless	Same	AT&T / BellSouth	Same	www.cingular.com
	Shono	Takashi	Intel K.K.	Same	Intel Corporation	Same	www.intel.co.jp
	Sihn	Gyung-Chul	ETRI	Same	Not Applicable	Not Applicable	www.etri.re.kr
167	Sivanesan	Kathiravetpillai	Samsung Electronics Company	Same	Samsung Electronics Company	Not Applicable	www.samsung.com
	Song	LeiLei	Marvell Semiconductor Inc	Same			www.marvell.com
	Song	Young Seog	ETRI	same	Not applicable	Not applicable	www.etri.re.kr
170	Sorensen	Henrik	Agere Systems	Same	Not applicable	Not Applicable	www.agere.com
171	Springer	Warren	Springer Associates	Same	Not Applicable	Not Applicable	
172	Srinivasan	Roshni	Intel Corporation	Same	Not Applicable	Not Applicable	URL www.intel.com
173	Staver	Doug	3581969 Canada Inc.	Same	Not Applicable	Not Applicable	
174	Stuby	Rick	Agere Systems	Same	Not Applicable	Not Applicable	www.agere.com
176	Suh	Mark	Samsung Telecommunications America	Same	Samsung Electronics Company	Not Applicable	www.samsungtelecom.com
177	Surcobe	Valentin	Motorola	same	Not applicable	Not Applicable	www.motorola.com
178	Suzuki	Tomohiro	Kyocera Corp.	Same	Not Applicable	Not Applicable	www.kyocera.co.jp
179	Tan	Teik-Kheong (TK)	NXP Semiconductors	Same	Not Applicable	Not Applicable	www.nxp
180	Teague	Harris	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm.com
181	Tee	Anna	Samsung Telecommunications America	Same	Samsung Electronics Co., Ltd.	Not Applicable	http://www.samsungwirelss.com

	Tomcik	Jim	Qualcomm,	Same	Not Applicable	Not Applicable	http://www.qualcomm.com
182							
183	Ulupinar	Fatih	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm. com
184	Upton	Jerry	Self, JUpton Consulting	Qualcomm and Self	NA	Qualcomm, Inc. and Self	
185	Vaidya	Rahul	Samsung India Software Operations Private Limited	Same	Samsung Electronics Company	Same	http://www.samsungindiasoft.com
186	Valbonesi	Lucia	Motorola, Inc.	Same	Not Applicable	Not Applicable	www.motorola.com
187	Valls	Juan Carlos	Telecommunications Management Group	Qualcomm, Inc.	Not applicable	Not applicable	www.tmgtelecom.com
188	Vijayan	Rajiv	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm. com
189	Vivanco	Silvia	Telecommunications Management Group	Qualcomm	Not applicable	Not applicable	www.tmgtelecom.com
190	Ward Jr	Robert M	Northrop Grumman	Same	N/A	N/A	
191	Wasilewski	Tom	Qualcomm Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm. com
192	Watanabe	Fujio	DoCoMo Communications Laboratories USA, Inc.	Same	NTT DoCoMo USA, Inc.	Not Applicable	www.docomolabs-usa.com
193	Wieczorek	Al	Motorola, Inc.	Same	Not Applicable	Not Applicable	Al.Wieczorek@Motorola.com
194	Wilson	Joanne	ArrayComm, LLC	Same	Ygomi, LLC	Ygomi, LLC	www.arraycomm.com
195	Wu	Geng	Nortel Networks.	Same	Not Applicable	Not Applicable	www.nortel.com
196	Xiaoshu	Qian	Intel Corp	Same	N/A	N/A	www.intel.com
197	Yaghoobi	Hassan	Intel Corporation	Same	Not Applicable	Not Applicable	www.intel.com
198	Yallapragada	Rao	Qualcomm, Incorporated	Same	Not Applicable	Not Applicable	http://www.qualcomm. com
199	Yeh	Choong il	ETRI	same	Not applicable	Not applicable	www.etri.re.kr
200	Yin	Hujun	Intel Corp.	Same	N/A	N/A	www.intel.com
201	Youssefmir	Michael	Self	ArrayComm		Ygomi Group	www.arraycomm.com
202	Yuda	Tetsuya	Kyocera Corp.	Same	Not Applicable	Not Applicable	www.kyocera.co.jp
203	Yun	Jungnam	POSDATA Co. Ltd.,	Same	Not Applicable	Not Applicable	www.posdata.co.kr

	Yuza	Masaaki	NEC Infrontia Corp.	same	NEC Corp.	Not Applicable	www.necinfrontia.co.jp
204							
205	Zhu	Peiying	Nortel	Same	Not Applicable	Not Applicable	www.nortel.com
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